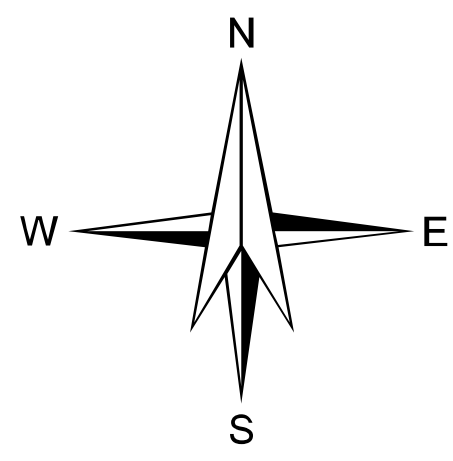
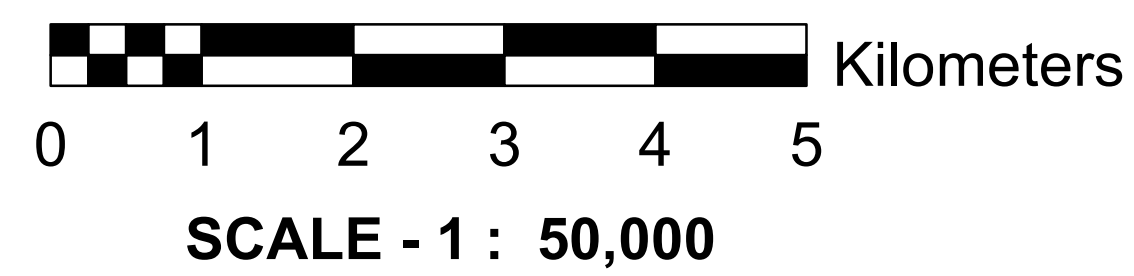


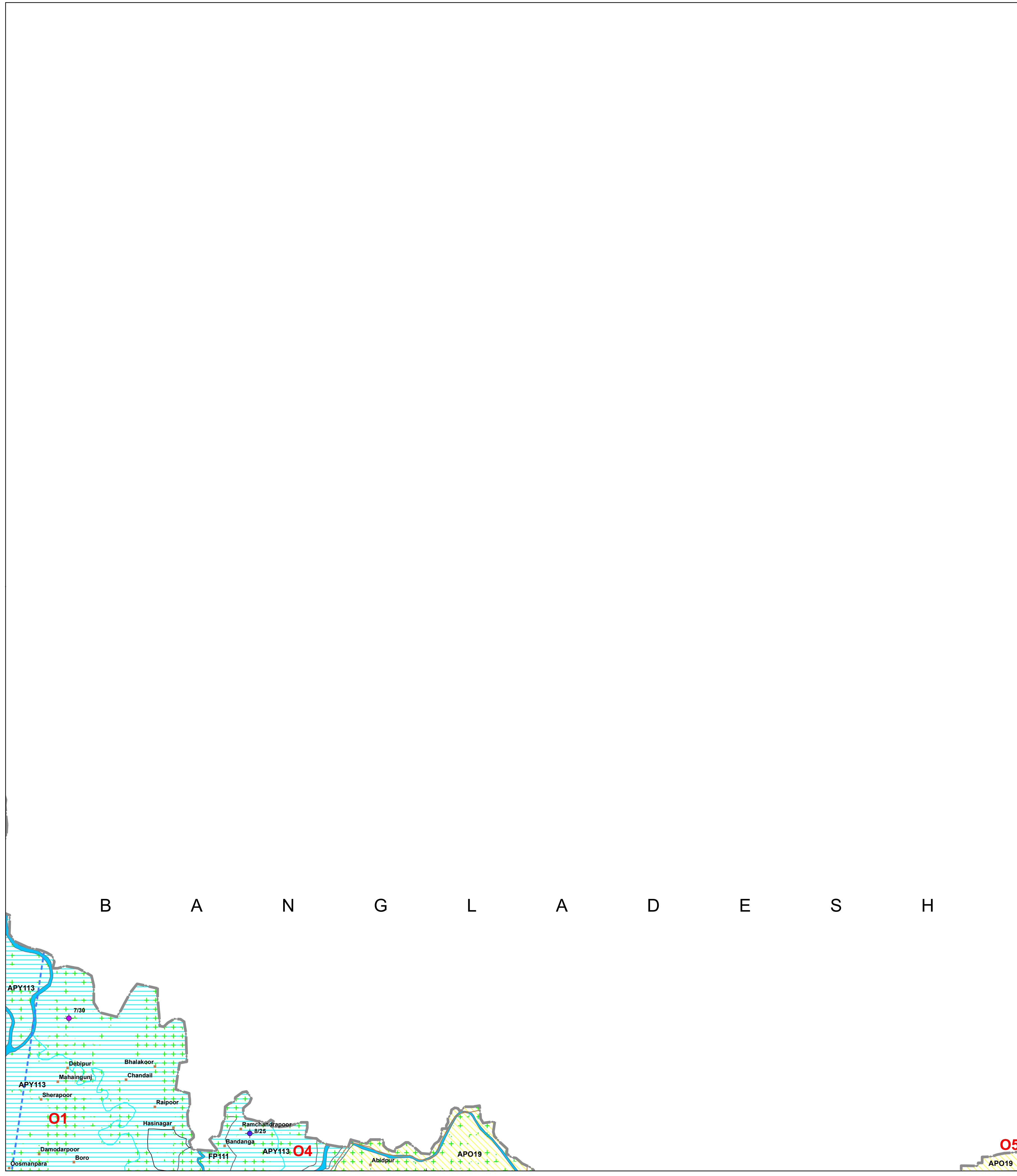
GROUND WATER PROSPECTS MAP

(PREPARED FROM SATELLITE IMAGE INTERPRETATION WITH LIMITED FIELD CHECKS)



MAP SHEET NO. 78C/10

DAKSHIN DINAJPUR DISTRICT, WEST BENGAL



© NRSC (ISRO), DEPT. OF SPACE, GOVT. OF INDIA DATA USED : IRS - P6 LISS III FCC dated February 2006, GROUND TRUTH & WELL OBSERVATION during April-May, 2009 & Jan-Feb, 2010. Published Geological maps & Literatures. Designed & Developed by Hydrogeology Division, NRSC, ISRO

LEGEND

MAP UNIT (HYDROGEOLOGIC UNIT) REPRESENTED IN THE MAP WITH ALPHABETIC CODE (COLOUR INDICATES YIELD RANGES AND HATCHING INDICATE DEPTH RANGES)	GEOLOGICAL SEQUENCE / ROCK TYPE (REPRESENTED IN THE MAP WITH NUMERIC CODE)	GEOMORPHIC UNIT / LANDFORM (REPRESENTED IN THE MAP WITH ALPHABETIC CODE)	DEPTH TO WATER LEVEL PRE / POST MONSOON (AVERAGE IN METERS) NO. OF WELLS OBSERVED	RECHARGE CONDITIONS BASED ON AVAILABILITY OF WATER (RAINFALL & OTHER SOURCES)	GROUND WATER PROSPECTS						RECHARGE STRUCTURES SUITABLE & PRIORITY	REMARKS (PROBLEMS / LIMITATIONS)	
					AQUIFER MATERIAL	TYPE OF WELLS SUITABLE	DEPTH RANGE OF WELLS (METERS)	YIELD RANGE OF WELLS (LPM)	HOMOGENEITY IN THE UNIT & SUCCESS RATE OF WELLS (PROBABILITY)	QUALITY OF WATER (POTABLE / NON-POTABLE)			GROUND WATER IRRIGATED AREA (APPROX. RANGE IN PERCENTAGE)
PB111	Shalugan Formation / Present Day Deposits (111)	Point Bar (PB)	No Well Observed	Very Good	LS	TW	5-10 m	300-400 LPM	Very High	P	Nil	Not Required	Groundwater prospects very high with high recharge potential. Recharge structures not required.
FP111		Flood Plain (FP)	No Well Observed	Very Good	LS	TW	<30 m	250-350 LPM	Very High	P	65	Not Required	Receives good recharge and forms shallow aquifer. Overall quality of the water is potable.
APY113	Maidi / Bahadur Formation (Early-Late Miocene)	Alluvial Plain Younger (APY)	9 / 7 2	Good	LS	TW	25-30 m	200-250 LPM	High	P	50	Not Required	Highly productive aquifer at shallow depth with good recharge. Unit partly contaminated by high concentration of Fluoride in all the blocks. Deeper aquifer likely to provide potable water.
APO19		Alluvial Plain Older (APO)	10 / 7 1	Moderate	LS	RW TW	50-60 m	75 - 100 LPM	Moderate	p	75	Not Required	Shallow aquifers form due to clayey sediments. Aquifers occur at more depth. Unit partly contaminated by high concentration of Fluoride in all blocks.

These are fault / fracture zones, which generally act as conduits for movement of ground water in hard rocks. Along these zones, the yields are significantly higher and wells are likely to be sustainable for longer duration. However, the inferred fractures need to be confirmed by detailed ground surveys.

These are dykes, quartz reefs and pegmatite veins, which generally act as barriers for ground water movement.

N.B.-The depth range and yield range of wells may vary within the unit because of certain inhomogeneities. Fractures/Lineaments which are clearly observed / inferred from the satellite image are indicated on the map. There could be some obscured fractures which also influence the ground water prospects. Locations of the recharge structures shown in the map are tentative. This map is useful for narrowing down the target zones and exact location on the ground for wells and recharge structures should be identified based on follow-up ground hydrogeological/geophysical surveys.

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